D.T.E. 01-28 (Phase I)

Investigation by the Department of Telecommunications and Energy on its own Motion into the Installation of Advanced Metering Equipment by Electric Distribution Companies at the Facilities and Homes of their Distribution Customers.

I. BACKGROUND AND PROCEDURAL HISTORY

On February 8, 2001, the Department of Telecommunications and Energy ("Department") opened an investigation designed to develop generic terms and conditions for the provision of advanced metering services by electric distribution companies. In initiating these proceedings, the Department proposed terms and conditions for implementation by distribution companies concerning the provision of advanced metering services. This investigation encompasses the goals stated by the President of the United States, George W. Bush, as part of the National Energy Policy released to the public on May 16, 2001. In developing the President's National Energy Policy, President Bush noted that "advanced integrated supply-and-demand load management controls would allow for widespread 'demand auctions,' in which consumers can decide which energy services to forego on which days." National Energy Policy, chapter 6, at 9 (May 16, 2001). The Department's directives to require distribution companies to offer advanced metering services to their customers is an integral part of encouraging electric competition in the Commonwealth and to provide consumers with the opportunity and financial incentive to use electricity more efficiently.

On March 1, 2001, the Department conducted a technical session wherein the following participants commented on the Department's advanced metering proposal: The Attorney General; The Commonwealth of Massachusetts Division of Energy Resources ("DOER"); Associated Industries of Massachusetts ("AIM"); The Energy Consortium ("TEC"); Massachusetts Health and Educational Financing Authority ("HEFA"); Massachusetts Electric Company and Nantucket Electric Company ("National Grid"); NSTAR Electric ("NSTAR"), Western Massachusetts Electric Company ("WMECo"); Fitchburg Gas and Electric Light Company ("Fitchburg"); and Schlumberger Resource Management Services ("Schlumberger").

National Grid, NSTAR, (2) WMECo, and Fitchburg submitted their proposed tariffs for the provision of advanced metering services. Initial comments on the proposed tariffs were submitted individually by Schlumberger, and jointly by The Attorney General, DOER, AIM, HEFA, and TEC ("Customer Group"). National Grid, NSTAR, (3) and WMECo filed reply comments.

II. THE DEPARTMENT'S PROPOSAL

The Department's proposed terms and conditions included the following options by which distribution companies would provide advanced metering services to their customers:

Option 1

The company would provide advanced metering services to a customer by purchasing and installing advanced metering equipment that would allow for the reading of the customer's electricity usage at 15-minute intervals. The company would own the metering equipment and would be responsible for maintaining and replacing such equipment, as necessary. The company would select the metering equipment for use by the customer. The company would read the customer's usage data on a daily basis and use the metered data to report the customer's hourly loads to the Independent System Operator -- New England ("ISO"). The fee for this service option would be based on the cost of providing the service, and could be paid on a monthly basis or in one lump payment ("Option 1");

Option 2

The company would provide advanced metering services to a customer by installing advanced metering equipment that would be purchased and owned by the customer. The company would identify the metering equipment that would be available under this option, and would be responsible for maintaining and replacing such equipment, as necessary. The company would read the customer's usage data on a daily basis and would use the metered data in reporting the customer's hourly loads to the ISO. Because the customer would be responsible for purchasing the metering equipment, there would be no fee for this service ("Option 2");

Option 3

The company would provide advanced metering services to a customer by purchasing and installing a pulse interface device that would be attached to the customer's existing meter. The customer would purchase and install a modem-equipped recording device, to be connected to the pulse interface device, that is capable of recording the customer's electricity usage at 15-minutes intervals. The company would own the metering equipment and the pulse interface device, and be responsible for maintaining and replacing such equipment and device, as necessary. The customer would own the recording device. The company would read the customer's usage data on a daily basis and use the metered data to report the customer's hourly loads to ISO. The fee for this service option would based on the cost of providing the service, and could be paid monthly or in one lump payment ("Option 3").

III. THE DISTRIBUTION COMPANIES' PROPOSED TARIFFS

To ensure that advanced metering services are made available to customers by Summer 2001, the Department requested the distribution companies to submit tariffs based on the services outlined in Options 1 and 3 of the Department's proposed terms and conditions. The advanced metering tariffs proposed by each company include the two options discussed above. In addition, the tariffs proposed by Fitchburg, NSTAR, and WMECo would allow customers to request special metering services not detailed in Options 1 or 3. WMECo's proposed tariff differs from those tariffs proposed by the other distribution companies in that WMECo would provide customers with the option of communicating their usage data to the company either by phone automatic meter reading, or late night telemetering.

All of the advanced metering tariffs submitted by the distribution companies would provide customers with two payment options, an initial lump sum payment or a monthly payment. The tariffs submitted by Fitchburg, NSTAR, and WMECo require that customers who choose to pay for the meter on a monthly basis take service for a minimum term - one year for WMECo, and two years for Fitchburg. The tariffs submitted by National Grid and WMECo included proposed fees, while Fitchburg and NSTAR indicated that the fee schedules were under development.

The advanced metering tariffs submitted by National Grid and NSTAR include the following additional services that would be available to customers taking service under the tariff: (1) power outage reporting, under which the company would notify customers within one hour after an outage has occurred; (2) peak consumption notification (demand overload), under which the company would notify customers, within one hour, if their usage exceeds a customer-specified KW threshold; (3) meter read on appointment (autoread), under which customers may request specific dates and times for their meter reads; (4) meter read on request, under which the company would obtain a meter reading within one hour of receiving a request from a customer; (5) advanced meter information read on demand, under which the company would provide power quality data to customers (or their authorized designees). WMECo's tariff included the meter read on appointment and meter read on request services.

In addition to the above tariffs, National Grid, NSTAR, and WMECo also submitted proposed tariffs designed to provide historic interval load data to customers and their authorized agents. These data would be available both on a one-time basis or annually on a subscription basis. The historic interval data tariffs submitted by National Grid and WMECo included proposed fees, while NSTAR indicated that the fee schedules were under development.

IV. SUMMARY OF COMMENTS

A. Customer Group

The Customer Group recommended several changes to the proposed tariffs that would make them more consistent with proposed tariffs filed by National Grid as part of a settlement agreement. (6)

First, the Customer Group recommended that the Department reject the minimum terms of service proposed by Fitchburg, NSTAR, and WMECo for those customers selecting the monthly payment option. In their comments, the Customer Group did not specify why they opposed the implementation of minimum terms of service, except to note that a minimum term was not included in the National Grid Settlement Tariff (id. at 8). Second, the Customer Group recommended that the tariffs proposed by Fitchburg and NSTAR be revised to include language that clarifies that advanced meters installed at customers' facilities would continue to be used to determine electricity consumed for billing purposes (id.). Third, the Customer Group recommended that each distribution company's tariff include language wherein customers and their authorized representatives may

access their consumption data through both an optical port and electronically (<u>id.</u> at 9). Finally, the Customer Group recommended that the tariffs proposed by Fitchburg, NSTAR and WMECo be revised to reference a list of permissible meters for installation by companies (<u>id.</u> at 8). The Customer Group stated that such a list would eliminate customer confusion as to which meters are available for installation (id.).

With respect to the fees that the distribution companies would charge customers for the advanced metering services, the Customer Group recommended that the Department approve the proposed fees, subject to an investigation into whether the fees are cost-based and just and reasonable (<u>id.</u> at 7-8). The Attorney General and HEFA recommended that the fees should be subject to refund if the Department, in its investigation, concluded that the fees were not just and reasonable (<u>id.</u>). The Customer Group added that the Department should approve tariffs only for those services that a distribution company are currently capable of providing (id. at 9).

In addition to the above recommendations, the Customer Group suggested that the Department investigate whether customers should be allowed to purchase and own the advanced metering equipment (as addressed in Option 2 of the Department's proposed terms and conditions), and whether to require the universal deployment of advanced metering technology (<u>id.</u> at 10-11). The Customer Group recommended that the Department establish a working group to address these issues and identify other matters relevant for this investigation (<u>id.</u>). Finally, the Customer Group recommended that, among other things, the Department require each distribution company to amend their general terms and conditions to incorporate a universal description of enhanced metering services, define the terms associated with these services, and detail customer rights and responsibilities regarding the provision of advanced metering services (<u>id.</u> at 11).

B. Schlumberger

Schlumberger stated that, while the tariffs proposed by the distribution companies are an important step forward, only large customers are likely to take service under the tariffs, as the fees would be too high for small customers (Schlumberger Comments at 2-3). For example, Schlumberger notes that the \$8.39 monthly fee proposed by National Grid to provide advanced metering services is approximately ten percent of a typical residential customer's monthly bill (<u>id.</u>). Therefore, Schlumberger recommended that the Department immediately open a second phase in this proceeding "to explore how distribution companies can capture the economies and efficiencies of system-wide deployment and bring the benefits of advanced metering to all customers" (<u>id.</u> at 5).

C. National Grid

National Grid stated that, while it does not oppose an investigation into its proposed fees, it recommends that such an investigation be completed quickly and that any revisions made to the fees be effective on a prospective basis only (National Grid Comments at 1). To do otherwise, National Grid argues, would cause customer confusion on price of the services that could negatively impact participation in advanced metering programs (id.).

Moreover, National Grid stated that it supports the establishment of a working group to address unresolved issues associated with advanced metering, but only to the extent that such an effort not delay the implementation of its tariffs (id. at 1-2).

D. NSTAR

NSTAR stated that implementing fees for advanced metering services subject to refund, as recommended by the Attorney General and HEFA, is inconsistent with Department precedent prohibiting retroactive ratemaking (NSTAR Comments at 5-6). Therefore, NSTAR argues that the Department lacks authority to approve rates subject to refund (id.).

NSTAR addressed several of the issues raised by the Customer Group. First, NSTAR maintained that a minimum term requirement for customers that select the monthly payment option is reasonable because it ensures that one customer will not be responsible for the unavoidable costs incurred on behalf of another (<u>id.</u>). Second, NSTAR specified that Company-owned advanced meters installed at customers' facilities would continue to be used to determine the electricity consumed by the customer for billing purposes. NSTAR stated that when there is a difference between the data contained on the Company-owned advanced meter and the customer-owned recording equipment, the Company would rely on consumption data from the advanced meter for billing purposes (<u>id.</u> at 8-9). Third, NSTAR agreed to participate in a working group to (1) develop a statewide list of meters that would be installed by all distribution companies, and (2) identify new metering technologies that would address the needs of customers (<u>id.</u>).

NSTAR stated that it does not support the recommendations of the Customer Group to allow customers to own the metering equipment, as proposed by the Department in Option 2 of its terms and conditions (<u>id.</u> at 9). Instead, NSTAR recommends that the Department focus on the implementation of Options 1 and 3 and that, once experience is gained from providing advanced metering services, an evaluation can be made as to what, if any, alternatives should be considered (<u>id.</u> at 10). NSTAR stated that it also opposes the Customer Group's recommendation that the distribution companies amend their terms and conditions to incorporate universal definitions, stating that such an exercise would be time consuming and fruitless (<u>id.</u> at 11-12). Finally, NSTAR stated that any decision concerning the universal deployment of advanced metering equipment should be deferred pending an adequate evaluation of customer demand and benefits for these services (<u>id.</u>).

E. WMECo

WMECO identified several concerns raised by the Customer Group which WMECo claims are alleviated by the manner in which the Company currently provides metering services to its customers (WMECo Comments at 3-4). First, WMECo stated that, consistent with existing practice, authorized agents may request advanced metering services on behalf of customers (<u>id.</u>). Second, WMECO stated that it would maintain any advanced metering equipment that it owns and installs (<u>id.</u>). Third, WMECo stated that its recording equipment stores a customer's data for a minimum of 35 days (<u>id.</u>). Fourth,

WMECO's stated that it currently allows customers to access to all of the meter's data, including real-time as well as recorded interval data and that customers have data access through the meter's optical port. Finally, WMECO stated that Company-owned advanced meters installed at customers' facilities would continue to be used to determine the electricity consumed by the customer for billing purposes (<u>id.</u>).

V. DISCUSSION

The Department considers it appropriate to view advanced metering issues from both a short-term and a long-term perspective. In the short-term, the Department considers it essential that the distribution companies have advanced metering tariffs effective for the installation of advanced metering equipment at customers' facilities for Summer 2001. The installation of advanced metering equipment at customers' facilities would provide customers with the opportunity and financial incentive to reduce consumption at times of higher prices, thus helping to relieve the strain on the electric system and mitigate price increases.

To further the Department's short-term objective of encouraging distribution companies to provide advanced metering services in Summer 2001, the Department requested the distribution companies to submit tariffs based on the services outlined in Options 1 and 3 of the Department's proposed terms and conditions. The Department concludes that the advanced metering services proposed by National Grid, NSTAR, WMECo and Fitchburg are consistent with the services outlined in Options 1 and 3. Specifically, all of the proposed tariffs (1) allow authorized agents to request advanced metering services on behalf of customers; (2) allow for the storage of metered data on company-owned equipment for a 35-day period; (3) allow customers to access their metered data both electronically and through an optical port; and (4) provide customers with both lump-sum and monthly payment options to pay for the services rendered. Therefore, the Department approves the advanced metering tariffs submitted by the distribution companies, conditioned on our approval of each company's proposed fees. Moreover, provided the fees charged are cost based, the Department will allow the implementation of minimum service terms for those customers who choose to pay for advanced metering services on a monthly basis.

Accordingly, the Department directs each distribution company, within seven days of the issuance of this Order, to submit proposed fees and supporting documentation relating to the provision of services proposed by each company in the tariffs submitted. Anyone interested in commenting on the proposed fees may do so in writing to the Department, no later than fourteen days after issuance of this Order.

Concerning the additional services included in the advanced metering tariffs submitted by National Grid, NSTAR, and WMECo (<u>i.e.</u>, power outage reporting, peak consumption notification, meter read on appointment, meter read on request, advanced meter read on demand), the Department concludes that these services are reasonable, noting that customers will avail themselves of (and pay for) these new services only to the extent that the types of information to be provided are deemed useful by the individual consumer.

Thus, the Department approves these additional services, with the caveat that National Grid, NSTAR, and WMECO include in their tariffs only those services that they currently are able to provide. The Department directs National Grid, NSTAR, and WMECo to submit proposed fees for those services, with supporting documentation, within seven days of this Order. Anyone interested in commenting on the proposed fees for the additional services may do so in writing to the Department, no later than fourteen days after issuance of this Order.

Finally, with respect to the historic interval load data tariffs submitted by National Grid, NSTAR, and WMECo, the Department notes that historical interval load data are essential to the development of a strong competitive electric generation marketplace, and therefore, approves the tariffs as submitted. The Department directs National Grid, NSTAR and WMECo to submit proposed fees for its interval data services, with supporting documentation, within seven days of this Order. Again, anyone interested in commenting on the proposed fees may do so in writing to the Department, within fourteen days of the issuance of this Order.

The Department is committed to establishing a regulatory environment that fully accommodates the efficient installation of advanced metering equipment at customers' facilities and residences. To that end, the Department will continue to investigate issues such as customer ownership of advanced metering equipment, as addressed in Option 2 of the Department's proposed terms and conditions, and other issues raised by the Customer Group and Schlumberger. The Department will notify participants in this proceeding in August 2001 as to when a technical conference is scheduled.

VI. ORDER

Accordingly, after consideration and review, the Department

<u>ORDERED</u>: National Grid, NSTAR, Western Massachusetts Electric Company, and Fitchburg Gas and Electric Light Company to submit tariffs and supporting documentation in accordance with the directives contained herein.

By Order of the Department.

W. Robert Keating, Commissioner
Paul B. Vasington, Commissioner
Eugene J. Sullivan, Jr., Commissioner

Deirdre K. Manning, Commissioner

1. For purposes of this proceeding, "advanced metering equipment" are meters capable of recording customers' electricity usage at 15 minute intervals. The Department has stated that the installation of advanced metering equipment is essential for the development of a robust competitive generation market because it provides electricity consumers at the retail level with the information necessary to allow them to adjust their levels and

patterns of electricity usage based on prevailing wholesale generation market prices. <u>See</u> Terms and Conditions, D.P.U./D.T.E. 97-65, at 59 (1997).

- 2. Although NSTAR submitted tariffs designated for Cambridge Electric Light Company, NSTAR indicated that it would use the same format for the other NSTAR companies, Boston Edison Company and Commonwealth Electric Company (NSTAR letter of March 12, 2001).
- 3. NSTAR filed revised tariffs with their reply comments.
- 4. NSTAR indicated that it would specify a minimum term for customers who pay for the meter on a monthly basis, when it submits its specific fees in compliance with this Order.
- 5. Neither National Grid nor WMECo submitted documents in support of their proposed fees.
- 6. The National Grid settlement was signed by National Grid, DOER, AIM and TEC. On September 15, 2001, the Department rejected the settlement proposal pending our investigation of the matter in <u>Competitive Metering</u>, <u>Billing and Information Services</u>, D.T.E. 00-41 (2000). The National Grid Settlement proposal was docketed as D.T.E. 00-59.
- 7. Because the NEPOOL control area is a summer-peaking system, the summer months are the time period during which the overall capacity of the system is most likely to be strained and electricity price are most likely to increase. To provide broader opportunities and incentives for customers to reduce consumption, the ISO has proposed a Load Response Program that is scheduled to begin operation on or before June 1, 2001 a prerequisite of participation in that program is the installation of advanced metering equipment at a customer's facility.
- 8. Tariffs may, of course, be amended as other services are added.
- 9. The Department does not require Fitchburg to offer these additional services, noting that these services were not included in the Department's proposed terms and conditions.